

**REMARKS**

In response to the official office action dated May 10, 2005, clarifying amendments have been made to claim 31, 32, 34, 37 and 39 to correct inconsistent terminology, and minor errors in the specification have been corrected. For reasons set forth below, it is believed that the claims allowable over the art made of record by the Examiner and re-examination of the application is therefore respectfully requested.

**§102 Rejections**

The Examiner rejects claims 1, 13-17, 19, 27, 31, 32 and 34 under §102 as anticipated by Karlsson. However, Karlsson fails to teach or suggest all of the elements of the claimed invention. The multi-user receiver could also be used to receive multiple signals from the same user. In the claimed invention, the received signals from multiple users are combined in a manner that cancels multi-user interference. Interference cancellation is achieved by determining cross-correlations between the spreading codes for different users. The cross-correlations between spreading codes are then used to filter the received signals to reduce multi-user interference.

In contrast, Karlsson discloses a single user receiver to detect a signal transmitted by a single user. The receiver structure in Karlsson is essentially the same as a conventional RAKE receiver. The received signal is despread in a plurality of RAKE fingers, each of which is tuned to a different delay. The despread signals output from each finger are then weighted and combined to produce a combined RAKE output signal. Karlsson differs from a conventional RAKE receiver in that the spreading code used to despread the received signal changes from one symbol period to the next. Karlsson recognizes that the spreading sequence used to spread the signal at the transmitter may extend over multiple symbol periods. Karlsson teaches using a constituent part of the spreading sequence corresponding to the symbol period to despread the received signal. For example, if the spreading sequence extends over four symbol periods, the spreading sequence is divided into four parts which are used to despread

four consecutive symbols. The despread signals, which all belong to a single user, are then combined to generate the RAKE output signal.

There is no discussion in Karlsson of using correlations to reduce mutual interference between different signals. Applicant notes that claims 1 and 31 specifically recite using cross-correlations between spreading codes to compute filter co-efficients. There is no mention in Karlsson of code cross-correlations or use of code cross-correlations to compute filter co-efficients. Further, claims 1, 14 and 31 recite all recite combining signals from different users. Karlsson is a single user receiver and does not combine signals from different users. For these reasons, claims 1, 14 and 31 are not anticipated by Karlsson.

### **§103 Rejections**

The Examiner further rejects 10-12, 28-30 and 39-41 under §103 as obvious over Karlsson in view of Hui et al. Applicant first notes that the present application has a filing date of August 31, 2001. As this filing date is after Nov. 29, 1999, the provisions of §103(c) that disqualify certain otherwise available prior art apply to this application. Applicant further notes that Karlsson and Hui patents relied on by the Examiner issued after the present application was filed. Thus, the only way that Karlsson and Hui et al can qualify as prior art is under §102(e). However, §103(c) disqualifies §102(e) art for purposes of §103 rejections if the "subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person," 35 U.S.C. §103(c); *see also*, MPEP § 706.02(l).

The Karlsson patent appears on its face to be owned by Telefonaktiebolaget LM Ericsson of Sweden. When the present application was originally filed, the application papers included an assignment of the present application to Ericsson Inc. of North Carolina. The Examiner's attention is directed to reel/frame 012142/0210 of the PTO assignment records. Based on information provided by Ericsson Inc., the undersigned understands that Ericsson Inc.

is and was at all relevant times 100% owned by a holding company known as Ericsson Holding II Inc. (Delaware); and that Ericsson Holding II Inc. is and was at all relevant times 100% owned by Telefonaktiebolaget LM Ericsson of Sweden. Thus, the owner of the present application, Ericsson Inc., is wholly owned subsidiary of Telefonaktiebolaget LM Ericsson of Sweden. As a wholly owned subsidiary, §103 and MPEP §706.02 disqualifies patents owned by Telefonaktiebolaget LM Ericsson that qualify as prior art under §102(e)-(g) from being used against applications filed by Ericsson Inc. to support a rejection under §103.

In light of the above company relationships, Applicant submits that the present application and the Karlsson and Hui patents were owned by the same "person," or under an obligation of assignment to the same "person," at the time of the invention of the subject matter of the present application. Accordingly, it is submitted that any §103 rejection based on Karlsson and Hui must fail.

As any claims currently rejected are rejected only under §103 based at least in part on the now-disqualified Karlsson and Hui patent, Applicant submits that the presently rejected claims define patentable subject matter, and their allowance is requested.

The undersigned can be reached at (919) 854-1844.

August 10, 2005

By:

Respectfully submitted,

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